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Federal Communications Commission
Office of Secretary

VIA MESSENGER

December 19, 1996

The Honorable Reed E. Hundt, Chairman
Federal Communications Commission
1919 M Street, Room 814
Washington, D.C. 20554

Reference: CC Docket No. 96-45 In the matter of Common Carrier Bureau Seeks Comment
on Universal Service Recommended Decision

Dear Mr. Chairman:

The American Hospital Association (AHA) on behalf of its 5,000 member hospitals and health systems is pleased to respond to the request of the Common Carrier Bureau of the Federal Communications Commission (FCC) for additional information pursuant to the Federal-State Joint Board's Recommended Decision regarding universal service issued on November 7, 1996.

As a general statement, the AHA supports the findings and recommendations of the Advisory Committee on Telecommunications and Health Care, and urges the Commission to adopt them. We are pleased that the Advisory Committee agreed with comments in our April 12, 1996 letter that potential health care applications in rural areas be viewed broadly to include a range of traditional wired and wireless service in consideration of the unique needs of rural residents.

The Advisory Committee's minimum package of telecommunications service to be covered under universal services would include a "market basket" approach with comparable coverage available for:

- 1) Internet access such as electronic mail, health care information, and collaborative applications on the Internet;
- 2) Transmission services providing dedicated or switched service at or below 1.544 mbps that are part of a carrier's standard offering; and

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- 3) Minimum data and voice transmission at 4.8 kbps to enable ambulances and helicopters in rural communities to communicate with emergency departments and urban trauma centers.

While telemedicine is not a panacea, we agree with the Advisory Committee's assessment that telemedicine holds promise to improve the availability of needed health services to millions of Americans, and that rural health care providers should be greatly benefited by the Act's provisions to both reduce the cost of telecommunications service and help guarantee adequate telecommunications infrastructure for the provision of needed health services.

The Advisory Committee has clearly agreed with our assertion that rural practitioners and patients have the additional burden of longer travel times to needed service, and should be able to make better use of information via land lines as well as through cellular and mobile satellite services. We hope that the Joint Board will, upon further investigation, agree with all of these recommendations and include them in its decision.

1. **The Growing Use of Telecommunications for Health Care**

While it is extremely difficult to document the rapidly expanding level of interest in telemedicine-related programs throughout the nation, an early indication of this interest is evidenced by recent studies which attempt to characterize the potential market for telecommunications-related services in rural health care markets.

A 1996 survey for the publication *Telemedicine Today*, concluded that there has been a 66% increase (to a total of 50) in the number of interactive-video mediated telemedicine programs in the United States between 1994 and 1995.¹ This does not include the growth in many other applications of telecommunications for health care which would be covered if the Advisory Committee's recommendations were adopted by the FCC including hundreds of existing teleradiology programs; home health projects; consumer health efforts on the internet; telephone triaging and consultation programs; the use of acoustic coupling and/or fax machines to transmit EKGs/ECGs for cardiac monitoring; and many others referenced in this year's edition.

Even if they existed, an accounting of these "patient care" related telecommunications programs would still be deficient because it likely wouldn't include the score of additional applications of technology for public health, teaching and training, biomedical research, and administration and management.

¹*Telemedicine Today*. 3rd Annual Program Review, Ace Allen, MD, Editor, July/August 1996, pp. 10-17

A recent study by Abt Associates for the federal Office of Rural Health Policy reported that 30% of 2,472 rural hospitals surveyed, will be using some sort of telemedicine to deliver patient care, for administrative services and for teaching and training by the end of 1996.²

2. Issues of Costs

As the Abt study notes, most telemedicine networks are complex, containing an average of four spoke sites, two hubs, and four facilities to provide and receive consults. In addition, costs remain high to build and operate these networks with average equipment costs (excluding switches and new lines) ranging from \$134,378 for spoke sites to \$287,503 for hub sites. Reported annual transmission costs ranged from an average of \$18,573 for spokes to \$80,068 for hubs. Many rural hospitals, even acting in a consortium, would be unable to afford these infrastructure and transmission costs absent significant relief through the universal services fund.

Bill Welch, a member of the Advisory Committee and President of the Nevada Rural Hospital Project, provided cost information on the Nevada telecommunications project for rural providers in a presentation to the Joint Board on June 19, 1996. He stated that the equipment cost of interactive video with appropriate diagnostic equipment costs range from \$65,000 to \$100,000 per site. Transmission line costs for the six to eight needed fiber optic lines with multiple switch 56 capability involves a one time hook up of \$200 per line and a monthly service charge of \$40 per line in addition to long distance rates which vary by carrier and community.

High Plains Rural Health Network, headquartered in Fort Morgan, Colorado and including 13 rural and 6 urban health institutions spends \$3,934 per month on one in-state point-to-point telemedicine connection. The Bassett Healthcare Telemedicine Network in New York state reports monthly line charges for T1 lines ranging from \$2,198 to \$4,087 at different sites.

If connectivity can be provided at a reasonable cost, use of telemedicine may increase locally provided health care services, so that more of the rural health dollar can be re-invested in the local economy. The University of Kentucky Center for Rural Health estimates that 75% of all health care needs should be treated locally, either in the person's county of residence or in a neighboring county, yet in the average rural county less than half of health expenditures are spent locally. The Center further estimates that every five jobs in health care generate four jobs in the general local economy.³

²"Exploratory Evaluation of Rural Applications of Telemedicine," Survey by Abt Associates, Inc. for the federal Office of Rural Health Policy, November 7, 1996

³Presentation materials of the University of Kentucky Center for Rural Health, "Rural Health Care Retention and Economic Development," 1996

Just as health care expenditures translate into improved economic conditions for rural areas, so too does increased investment in telecommunications infrastructure. According to a report issued by the New York Department of Economic Development, over the 1972-91 time period, efficiency gains resulting from telecommunications infrastructure modernization and increased usage in New York State generated, on average, over 40,400 jobs per year in the state economy.⁴ These productivity enhancements generated a cumulative total of \$71 billion in real personal income between 1972 and 1991 as well as \$10.9 billion in state and local tax revenues.

AHA also recognizes the need for quality, affordable health services. Unfortunately, very little quantifiable information is presently available regarding the "per unit" or "per service" costs or savings associated with the various telecommunications technologies and modalities which might constitute the Advisory Committee's "market basket" of telecommunications services. It is our understanding that the Health Care Financing Administration has just begun a major cross-cutting evaluation of several leading telemedicine programs to determine issues of cost and efficiency for purposes of reimbursement under the federal Medicare program.

This lack of information is well understood within the field. As the Institute of Medicine concluded in its recent study entitled: *Telemedicine: A Guide to Assessing Telecommunications in Health Care*, "For many decision makers, the case for new or continued investment in telemedicine remains incomplete, particularly given the competition for resources in an era of budgetary retrenchment in health care and government. Most clinical applications of telemedicine have not been subjected to systematic comparative studies that assess their effects on the quality, accessibility, or cost of health care." Additionally, little systematic evaluation has occurred with regard to all of the other promising applications of telecommunications for preventive or sub-acute care services; population-based or public health services; post-acute care at home or in nursing homes--let alone the many non-health care delivery applications for teaching and administration.

Simply stated there is very little evaluative data regarding exactly what works, what doesn't and under what circumstances with regard to telecommunications for health care. And while it is well known that telecommunications infrastructure costs are out of the reach of many rural health care providers, we are unaware of any scientifically valid, published studies of the magnitude of the problem on either a national, regional or state basis. At the same time, we are attempting to gather as much information as possible within the time constraints of the FCC's process, and have solicited our membership for this information. We have attached responses we have received to date and will provide additional information as it becomes available to us.

Enabling federal regulatory policy must keep up with technological advances being made on a daily basis. To that extent, we are pleased that efforts are finally underway through both the

⁴McGraw-Hill/New York Department of Economic Development Report, June 1993

FCC and Health Care Financing Administration to address twin issues of infrastructure costs and reimbursement for telemedicine services.

3. Scope of Necessary Services

It is extremely difficult, if not impossible to respond to the Joint Board's question of "What is the exact scope of services that should be included in the list of additional services necessary for the provision of health care in a state." Health policy researchers have noted for some time that health care needs and the delivery of health services varies across states and among local communities. Moreover, as noted earlier, the wide range of applications for telecommunications and rapidly changing technology requires, that potential health care applications in rural areas be viewed broadly to include a wide range of choices for health care providers.

While the AHA supports the conclusions of the Advisory Committee regarding a minimum package of telecommunications service, due to the the lack of comprehensive data as well as the fast pace of change in the field we urge the Commission to revisit the initial final regulations within eighteen months of issuance rather than 2001 as recommended. This will provide additional time for development of the comprehensive data sought by the Commission.

The AHA has also previously recommended that the FCC should consider special circumstances of frontier areas where the population is less than 6 persons per square mile. These disparities are clear from an access point of view and should be considered separately given their unique nature.

4. Services Eligible for Support

We strongly agree with the Advisory Committee's recommendations to negate distance charges for services including bandwidths from Plain Old Telephone Service (POTS) up to and including 1.544 Mbps if they are part of the telecommunication carrier's standard offering for health care. The AHA agrees with legislative sponsors that Congress intended to give rural patients the same access to telecommunications services as urban patients, and that the imposition of any form of distance-based rates would be inconsistent with the Act. We urge the FCC to adopt a distance-neutral rate structure for rural telemedicine services.

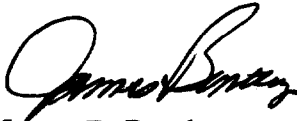
In addition, the Joint Board's Recommended Decision states that: "We recommend that the commission include terminating as well as originating services for universal service support in cases where the eligible health care provider would pay for terminating as well as originating services, such as in the case of cellular airtime charges." AHA continues to strongly support the Joint-Board's recommended decision, based in part on our April 12 suggestion, that "incoming cellular service" calls should be covered by discounted rates as well as "outgoing services."

Conclusion

We recognize the difficulty the FCC faces in attempting to implement the Advisory Committee's recommendations within the statutory time constraints in the absence of comprehensive national data. In consideration of the fast pace of developments in both health care and telecommunications, and the inadequacy of data with which to evaluate evolving efforts, we reiterate our recommendation that it would make sense to review any final FCC regulations relating to universal service for health care in eighteen months, rather than in 2001.

So much is already underway, and yet we cannot even begin to imagine many of the innovative uses of telecommunications for bringing essential health care service to people with limited access. The Snowe-Rockefeller-Kerry provision of the Telecommunications Reform Act of 1996 opens up a world of possibilities for health care in the information age. The AHA stands ready to assist the Commission by providing as much additional information as is available, and look forward to working with you further in this regard.

Sincerely,

A handwritten signature in black ink, appearing to read "James D. Bentley". The signature is fluid and cursive, with the first name "James" being more prominent.

James D. Bentley
Senior Vice President for Policy

Questions to Address:**1. Name of project:**

The Nevada Rural Hospital Project Foundation, Inc.'s
Frontier Telemedicine, a TIIAP grant from the US Dept of Commerce's NTIA

2. Please list each of the project's sites:

Name of Site:	State in which it is located:
<u>Humboldt General Hospital</u>	<u>Nevada</u>
<u>Mt. Grant General Hospital</u>	<u>Nevada</u>
<u>Pershing General Hospital</u>	<u>Nevada</u>
<u>William Bee Ririe Hospital</u>	<u>Nevada</u>
<u>Elko General Hospital</u>	<u>Nevada</u>

Please answer the following questions for each of your sites.
Use additional sheets if necessary.

3. What is the nearest city of population equal to or greater than 50,00 in your state, and approximately how far are you from its boundary?

City: Reno Distance from city boundary: 164 miles (Humboldt)
SEE ATTACHMENT 1 FOR OTHER SITES

4. Name of the project's telecommunications service provider:
Coordinator - Gerald Ackerman; Utilizing the University of Nevada School of Medicine.
and Washoe Medical Center. Others to be identified as
project develops.**5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)**

T-1 or equivalent

6. Charges for telecommunications service:

Is there a monthly charge? No ☐ Yes ☒If yes, how much is the charge? ranges from \$375 to \$700; dependent on the
distanceIs there a usage-based charge? No ☒ Yes ☐

If yes, how much is the charge? _____

Is there a distance component (such as a per-mile fee) of the charge? No ☐ Yes ☒If yes, how much is the charge? \$6.77 per mileWas there an installation fee? No ☐ Yes ☒If yes, how much was the charge? \$3,100 per siteIs the charge the regular tarrified rate, or is there a discount from the telecommunications provider? Tarrified ☐ Discount ☒If there is a discount, how much is it? Unknown

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Perform video consultations. The consultation needs identified by
rural practitioners include: mental health, assessment of handicapped
children, cardiology, substance abuse, orthopedics, internal medicine,
obstetrics, dermatology, trauma, geriatrics, and pediatrics.

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

No. Lesser bandwidth would cause a decrease in the quality of the image being sent which would decrease the consulting physician's ability to make the most informed diagnosis.

9. What would the implications of having a greater level of bandwidth be?

Higher speed equals higher quality.

10. Do you have e-mail? No ☐ Yes ☒

11. Do you have Internet access? No ☐ Yes ☒ - in selected facilities

If yes, do you incur long-distance charges by using it?

No ☐ Yes ☒ However, there is no cost if done over the T-1 line.

Please estimate your number of hours of Internet use per month:

Not known at this time.

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Accessing databases such as Grateful Med; recruitment/retention home pages

Prepared by

Nevada Rural Hospital Project Foundation, Inc.

Bill M. Welch, President

4600 Kietzke Lane, A-108B

Reno, Nevada 89502

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NRHP Welch@AOL.COM

Attachment 1

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

Mt. Grant	City: Reno	Distance: 132 miles
Pershing	City: Reno	Distance: 92 miles
William Bee Ririe	City: Las Vegas	Distance: 284 miles
Elko	City: Reno	Distance: 289 miles

**Kit Carson County Memorial Hospital***Professional Service Porsonal Care***DeAnn K. Cure, Chief Executive Officer**

December 16, 1996

TO: James D. Bentley
Senior Vice President for Policy
American Hospital Association

FROM: Dee Cure, Chief Executive Officer

SUBJECT: FCC Request for Information

It is very important to the future of our hospital, as a frontier hospital on the extreme eastern Plains of Colorado, that the universal service provisions of the Telecommunications Act of 1996 be implemented in a fashion that will significantly lower the cost of telemedicine services. Under the current tariff and charge structure, we will be forced to turn off our telemedicine unit when the grant funding ends at the end of the current federal fiscal year. We cannot assimilate this level of expense into our operating costs, because our patients will not be able to pay it.

We have used telemedicine technology during the past year for several applications ranging from dermatology consultations to a surgeon following a post-surgical patient without the patient having to travel to Denver. (Our nearest metropolitan area is the front range, with an average distance of 180 miles).

Thank you for your involvement with the FCC in this issue, as it is very important to the future of medical services in the rural and frontier areas of our nation.

The answers to the FCC questions are:

1. Name of project:

Kit Carson County Memorial Hospital is a participating member of the High Plains Rural Health Network (Office of Rural Health Policy Grant)

2. Please list each of the project's sites:

Although there are many other sites involved in this project, I can only address the remaining questions from the perspective of our site.

3. **What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?**

City: Denver, CO Distance from city boundary: 180 miles

4. **Name of the project's telecommunications service provider:**

The local provider is PTI, a rural telephone service which purchased much of the USWest service areas after USWest was given an "upgrade or else" mandate from the State.

5. **Level of telecommunications service the project is currently using:**

We are using a T-1 line for the televideo communication. We also have teleradiology communications independent of the HPRHN grant, and this technology uses our standard voice grade communications.

6. **Charges for telecommunications service:**

Is there a monthly charge?

Yes

If yes, how much is the charge?

This is paid by the grant, so I do not know exactly what the fee is, but the latest figures I am aware of were that the fee is in the range of \$2,500-\$3,000 per month.

Is there a usage-based charge?

No

Is there a distance component (such as a per-mile fee) of the charge?

No

Was there an installation fee?

Yes

If yes, how much was the charge?

I do not know.

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?

Tariffed, I believe

7. **How does the project use telecommunications in the delivery of health care?**

Current usage:

Specialist consults, i.e., dermatology and cardiac care
Physical therapy consults
Follow-up of post-surgical patients
Continuing education - both clinical and administrative
Video conferencing for administrative purposes
Radiology - teleradiology over-reads of films

8. Could the project provide the services it is currently providing with less bandwidth?

It is extremely difficult to get good quality transmission of video images with less than T-1, because the delay makes the video "jumpy". This is very distracting to patient and consultant, and detracts from the quality of the interaction. Professionals such as physicians are not going to accept or work with a less than good quality image and speed.

With applications such as teleradiology, the transmission time is the only implication, and using voice quality lines is acceptable. The impact of doubling the time, or halving it, is a cost issue only, not a quality issue. In most cases, films can be transmitted in less than 10 minutes, which is acceptable.

9. What would the implications of having a greater level of bandwidth be?

Greater bandwidth would expand the availability of many video conferencing applications. This could lead to better patient care, with more immediate response to illness.

10. Do you have e-mail?

Yes, at home, but not at the hospital, because we just recently got local access numbers. Prior to this time, I have had to subscribe to an 800 number service just to get "on-line".

11. Do you have Internet access? Yes

If yes, do you incur long-distance charges by using it? Yes (800 number)

Please estimate your number of hours of Internet use per month:

Actual is 3-4 hours, but I would use it much more if local access were real.

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

We use the Internet for research on medical or other matters, and for generally reviewing current events in our field.